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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,069	01/28/2004	Chac-Whan Lim	46234	9472
1609 7590 04/05/2007 ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P. 1300 19TH STREET, N.W. SUITE 600 WASHINGTON,, DC 20036			EXAMINER CUNNINGHAM, GREGORY F	
			ART UNIT 2624	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	
3 MONTHS			04/05/2007	
			DELIVERY MODE	
			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/765,069

Applicant(s)

LIM, CHAE-WHAN ET AL.

Examiner

Greg F. Cunningham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This action is responsive to communications of application received 1/28/2004.
2. The disposition of the claims is as follows: claims 1 - 12 are pending in the application.
Claims 1 and 7 are independent claims.
3. The group and/or Art Unit location of your application has changed. To aid in the correlation of any papers for this application, all further correspondence should be directed to Group Art Unit 2624 (effective 03/07). Please be sure to use the most current art unit number on all correspondence to help us route your case and respond to you in a timely fashion.
4. When making claim amendments, the applicant is encouraged to consider the references in their entireties, including those portions that have not been cited by the examiner and their equivalents as they may most broadly and appropriately apply to any particular anticipated claim amendments.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Zeller et al., (US 7,054,461 B2), hereinafter Zeller.

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A. Zeller anticipates claim 1, “A device for determining whether or not an image is blurred, the device comprising:

an input part for receiving an image [col. 2, lns. 52-60, wherein ‘image scanned’ corresponds to “receiving an image”];

a block classification part for dividing the received image into blocks and classifying the divided blocks into character blocks and background blocks [col. 7, lns. 44-49, wherein ‘black representing ink color’ and ‘white representing paper color’ corresponds to “character blocks” and “background blocks”, respectively; col. 8, lns. 1-3, corresponding with blocks];

a character block energy calculation part for calculating an average energy ratio of the character blocks [col. 13 at ‘Ratio of mid frequencies to total energy ... Median less]; and

a blurring detection part for calculating an average energy ratio of the character blocks and determining whether or not the image is blurred based on a comparison of the average energy ratio with a predetermined threshold [col. 12, lns. 31-54; col. 12 – col. 13 at ‘This metric finds the minimum value over all blurring Threshold of pixel thresholds-T of the within-class variance. This metric calculation is a way of finding an optimum threshold for a bimodal distribution. In it, for each candidate threshold T the within-class variance is calculated as $W(T) = P(<T) * Var(<T) + P(=T) * Var(=T)$ Where P(T) is the fraction of the distribution less than T and Var(<T) is the variance of that set, and similarly for P(=T) and Var(=T). The least value for W(T) indicates the strength of peaks in the pixel value distribution. Pixel Variance The variance of the pixel values in the image blurring is related to the amount of contrast, and to the degree of blur. 1% Point on This metric represents the gray level value on ink color Histogram the histogram that is greater than 1% of the Distribution other

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pixel values in the distribution. Ratio of pixel values Minimum value of Sums(values 1/3 to 2/3 blurring at parts that fall within Peaks between peaks)/sum(between peaks) for sub- within image on the Histogram areas within image. Histogram Variance Variance of pixel histogram blurring Histogram Variation Variance of pixel histogram below threshold. blurring Near Low Peak Contrast (High peak-low peak)/high peak, where the blurring peaks correspond to peaks in the histogram of pixel values. Ratio of energy in Energy from DC+4 to 1/3 Nyquist/total blurring mid frequencies to energy total energy Ratio of energy in Energy from 1/3 Nyquist to 99% Nyquist/ cluster dot high frequencies to total energy printing total energy Ratio of energy near Energy near Nyquist freq/total energy DPI of printer Nyquist frequency to total energy Ratio of energy in 3.sup.rd level wavelet subband coeff/total 3.sup.rd level, blurring Wavelet Subband to where the subband may be the approximation, Total Energy in horizontal, or vertical coefficients in the Wavelet Level wavelet decomposition.]” [as detailed].

B. Per independent claim 7, this is directed to a method for the apparatus of independent claim 1, and therefore is rejected to independent claim 1.

Allowable Subject Matter

7. Claims 2-6 and 8-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Responses

8. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

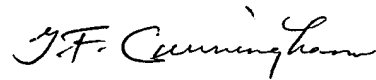
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Inquiries

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory F. Cunningham whose telephone number is (571) 272-7784.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on (571) 272-7778. The Central FAX Number for the organization where this application or proceeding is assigned is **571-273-8300**.

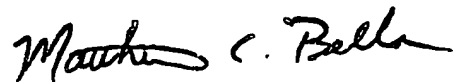
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gregory F. Cunningham
Examiner, Art Unit 2624

gfc

4/1/2007



MATTHEW C. BELLA
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